

Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

1. (currently amended) A method for transmitting data frames in a communications system comprising a transmitter and a receiver, comprising ~~the steps of:~~
transmitting a data frame from said transmitter to said receiver; and
when said transmitter receives a request from the receiver for retransmission of said data frame, retransmitting said data frame to the receiver without transmitting a signaling message identifying said retransmitted data frame;
receiving said retransmitted data frame at said receiver;
comparing said received retransmitted data frame to data frames stored in a buffer, the data frames stored in the buffer comprising data frames that were received with errors;
identifying a first data frame stored in the buffer which potentially corresponds to the received retransmitted data frame; and
combining the received retransmitted data frame with the first data frame to form a combined data frame.

2. (currently amended) ~~[[A]]~~ The method as claimed in of claim 1, further comprising the steps of wherein the comparing comprises:
~~receiving said retransmitted data frame at said receiver, and comparing said received retransmitted data frame to other data frames stored in a buffer; and~~
~~when a probability determining whether a likelihood of a match between said received retransmitted data frame and one of said data frames in said buffer exceeds at least one a first~~

predetermined threshold, and wherein the identifying comprises: said receiver combines said received retransmitted data frame with the matching said one data frame

identifying a data frame in which the likelihood of a match exceeds the first predetermined threshold as the first data frame.

3. (currently amended) [[A]] The method as claimed in of claim 2, further comprising: performing an error check on the combined data frame; and wherein when said combined data frame does not pass the error checking, probability is below any of said at least one predetermined threshold, said receiver performs the following steps:

storing in said buffer either said combined data frame, or said received retransmitted data frame and said matching first data frame in the buffer, depending on whether the likelihood of the match exceeds a second predetermined threshold which of said at least one threshold said probability is below; and

sending another retransmission request to said transmitter to request said transmitter to again retransmit said data frame.

4. (currently amended) [[A]] The method as claimed in of claim 1, wherein the comparing comprises further comprising the steps of:

receiving said retransmitted data frame at said receiver;
comparing said received retransmitted data frame to other data frames stored in a buffer to locate a potentially matching data frame which potentially matches said received retransmitted data frame, and to determine a probability of a match between said received retransmitted data

~~frame and said potentially matching data frame;~~

comparing a likelihood of a match between said received retransmitted data frame and the data frames stored in said buffer ~~said probability~~ to a first threshold; and

when said ~~probability~~ likelihood is below said first threshold for each of the data frames stored in the buffer, storing said received retransmitted data frame in said buffer.

5. (currently amended) ~~[[A]]~~ The method as claimed in ~~of~~ claim 4, wherein:

when said ~~probability~~ likelihood is below said first threshold for each of the data frames stored in the buffer, sending another retransmission request to said transmitter to request said transmitter to again retransmit said data frame.

6. (currently amended) ~~[[A]]~~ The method as claimed in ~~of~~ claim 4, wherein:

when said ~~probability~~ likelihood is at or above said first threshold for one of the data frames stored in the buffer:~~[[,]]~~

identifying the one data frame as the first data frame

~~combining said received retransmitted data frame with said potentially matching data frame to form a combined data frame.~~

7. (currently amended) ~~[[A]]~~ The method as claimed in ~~of~~ claim 6, further comprising the steps of:

verifying a criteria of said combined data frame; and

when said criteria of said combined data frame is acceptable, deleting said ~~potentially matching~~ first data frame from said buffer.

8. (currently amended) ~~[[A]]~~ The method as claimed in ~~of~~ claim 6, further comprising the steps of:

verifying a criteria of said combined data frame; and
when said criteria of said combined data frame is unacceptable, comparing said ~~probability~~ likelihood to a second threshold.

9. (currently amended) ~~[[A]]~~ The method as claimed in ~~of~~ claim 8, further comprising the steps of:

when said ~~probability~~ likelihood is above said second threshold, storing said combined data frame in said buffer; and

when said probability is below said second threshold, storing said received retransmitted data frame and said ~~potentially matching~~ first data frame in said buffer.

10. (currently amended) ~~[[A]]~~ The method as claimed in ~~of~~ claim ~~[[2]]~~ 1, wherein:

said comparing step compares a Hamming distance between said received retransmitted data frame and said ~~other~~ data frames stored in said buffer to locate said ~~matching~~ first data frame.

11. (currently amended) A computer readable medium ~~of~~ having stored instructions for controlling a receiver ~~of a communications system~~, comprising:

a first set of instructions~~[[,]]~~ adapted to control said receiver to analyze a criteria of a received data frame and to transmit a request to said a transmitter for retransmission of said data frame when said criteria is unacceptable;

a second set of instructions[[,]] adapted to control said receiver to compare said a received retransmitted data frame to other data frames stored in a buffer to locate a potentially matching data frame, the other data frames comprising data frames that contained errors, and to determine a ~~probability~~ likelihood of a match between said received retransmitted data frame and said potentially matching data frame; and

a third set of instructions[[,]] adapted to control said receiver to combine said received retransmitted data frame with said potentially matching data frame when said ~~probability~~ likelihood exceeds at least one predetermined threshold.

12. (currently amended) [[A]] ~~The computer readable medium of instructions as claimed in~~ of claim 11, further comprising:

a fourth set of instructions[[,]] adapted to control said receiver to perform the following steps when said ~~probability~~ likelihood is below any of said at least one predetermined threshold:

store in said buffer either said combined data frame, or said received retransmitted data frame and said matching data frame ~~in the buffer~~, depending on which of said at least one threshold said ~~probability~~ likelihood is below; and

send another retransmission request to said transmitter to request said transmitter to again retransmit said data frame.

13. (currently amended) A communications system, comprising:

a transmitter[[,]] adapted to transmit a data frame; and

a receiver[[,]] adapted to receive said data frame and to send a request for retransmission of said data frame ~~based on a criteria of~~ when an error check on said received data frame fails;

said transmitter being further adapted to retransmit said data frame to said receiver without transmitting a signaling message identifying said retransmitted data frame in response to said request,

said receiver being adapted to receive said retransmitted data frame, and to compare said received retransmitted data frame to other data frames stored in a buffer, the other data frames comprising data frames that failed an error check, and

when a likelihood of a match between said received retransmitted data frame and one of said other data frames in said buffer exceeds at least one predetermined threshold, said receiver combines said received retransmitted data frame with the matching said one data frame.

14. (canceled)

15. (currently amended) ~~[[A]]~~ The communications system as claimed in of claim 13, wherein said receiver is further adapted to perform the following operations when said ~~probability~~ likelihood is below any of said at least one predetermined threshold:

storing in said buffer either said combined data frame, or said received retransmitted data frame and said matching data frame ~~in the buffer~~, depending on which of said at least one threshold said ~~probability~~ likelihood is below; and

sending another retransmission request to said transmitter to request said transmitter to again retransmit said data frame.

16. (new) The method of claim 1, further comprising:

decoding the combined data frame to produce a decoded combined data frame;

verifying a criteria of the decoded combined data frame; and

when said criteria of said decoded combined data frame is acceptable, deleting the first data frame from the buffer.

17. (new) The method of claim 1, further comprising:

before performing the comparing, determining whether the retransmitted data frame includes a retransmission indicator; and

when the retransmitted data frame includes the retransmission indicator, modifying the retransmitted data frame to eliminate the retransmission indicator before performing the comparing.

18. (new) The method of claim 1, wherein the combining comprising:

soft combining the first data frame and the retransmitted data frame at said receiver.

19. (new) The method of claim 1, further comprising:

when the receiver determines that retransmission of the data frame is necessary, storing the data frame in the buffer.

20. (new) The computer readable medium of claim 11, further comprising:

a fourth set of instructions adapted to control said receiver to perform the following operations before the second and third sets of instructions:

determine whether the retransmitted data frame includes a retransmission indicator; and

when the retransmitted data frame includes the retransmission indicator, modify the retransmitted data frame to eliminate the retransmission indicator.

21. (new) The computer readable medium of claim 11, wherein the combining performed in accordance with the third set of instructions comprises soft combining the retransmitted data frame and the potentially matching data frame.

22. (new) The communications system of claim 13, wherein the receiver is further configured to perform the following operations before performing the comparing operation:
determine whether the retransmitted data frame includes a retransmission indicator, and
when the retransmitted data frame includes the retransmission indicator, modify the retransmitted data frame to eliminate the retransmission indicator.

23. (new) The communications system of claim 13, wherein the receiver comprises:
a combiner configured to soft combine the retransmitted data frame and said one data frame.

24. (new) A method, comprising:
receiving a data frame;
performing an error check on the data frame;
storing the data frame in a buffer when the data frame does not pass the error check;
transmitting a request for retransmission of the data frame;
receiving the retransmitted data frame, the retransmitted data frame being received without a signaling message identifying the retransmitted data frame;
comparing the retransmitted data frame to data frames stored in the buffer, the data frames stored in the buffer comprising data frames that were received with errors and combined data frames that did not pass an error check;

identifying a first data frame stored in the buffer that potentially corresponds to the retransmitted data frame; and

combining the retransmitted data frame with the first data frame to form a combined data frame.

25. (new) The method of claim 24, wherein the comparing comprises:

determining whether a likelihood of a match between the retransmitted data frame and one of the data frames stored in the buffer exceeds a first threshold, and wherein the identifying comprises:

identifying a data frame in which the likelihood of the match exceeds the first threshold as the first data frame.

26. (new) The method of claim 25, further comprising:

decoding the combined data frame;

performing an error check on the decoded combined data frame; and

deleting the first data frame from the buffer when the decoded combined data frame passes the error check.

27. (new) The method of claim 26, further comprising:

determining, when the decoded combined data frame does not pass the error check, whether the likelihood of the match is greater than a second threshold;

storing the combined data frame in the buffer, when the likelihood is greater than the second threshold; and

deleting the first data frame from the buffer, when the likelihood is greater than the second threshold.

28. (new) The method of claim 26, further comprising:
determining, when the decoded combined data frame does not pass the error check, whether the likelihood of the match is greater than a second threshold;
storing the retransmitted data frame in the buffer, when the likelihood is not greater than the second threshold; and
not storing the combined data frame in the buffer, when the likelihood is not greater than the second threshold.

29. (new) The method of claim 24, wherein the comparing comprises:
comparing a Hamming distance between the retransmitted data frame and the data frames stored in the buffer.

30. (new) The method of claim 24, wherein the comparing comprises:
comparing a Euclidean distance between the retransmitted data frame and the data frames stored in the buffer.

31. (new) A computer-readable medium having stored sequences of instructions, the instructions controlling a device to perform a method comprising:
receiving a data frame;
performing an error check on the data frame;

storing the data frame in a memory when the data frame does not pass the error check;
transmitting a request for retransmission of the data frame;
receiving the retransmitted data frame, the retransmitted data frame being received
without a signaling message identifying the retransmitted data frame;
comparing the retransmitted data frame to data frames stored in the memory, the data
frames stored in the memory comprising data frames that were received with errors;
identifying a first data frame stored in the memory that potentially corresponds to the
retransmitted data frame; and
combining the retransmitted data frame with the first data frame to form a combined data
frame.

32. (new) The computer-readable medium of claim 31, wherein the comparing comprises:
determining whether a likelihood of a match between the retransmitted data frame and
one of the data frames stored in the memory exceeds a first threshold, and wherein the identifying
comprises:
identifying a data frame in which the likelihood of the match exceeds the first threshold
as the first data frame.

33. (new) The computer-readable medium of claim 32, wherein the method further
comprises:
decoding the combined data frame;
performing an error check on the decoded combined data frame; and

deleting the first data frame from the memory when the decoded combined data frame passes the error check.

34. (new) The computer-readable medium of claim 33, wherein the method further comprises:

determining, when the decoded combined data frame does not pass the error check, whether the likelihood of the match is greater than a second threshold;

storing the combined data frame in the memory, when the likelihood is greater than the second threshold;

deleting the first data frame from the memory, when the likelihood is greater than the second threshold; and

storing the retransmitted data frame in the memory, when the likelihood is not greater than the second threshold.

35. (new) The computer-readable medium of claim 31, wherein the comparing comprises: comparing a Hamming distance between the retransmitted data frame and the data frames stored in the memory or comparing a Euclidean distance between the retransmitted data frame and the data frames stored in the memory.

36. (new) A system, comprising:

a receiver configured to receive data frames;

a memory;

logic configured to:

receive a data frame from the receiver,
perform an error check on the data frame,
store the data frame in the memory when the data frame does not pass the error
check; and

a transmitter configured to transmit a request for retransmission of the data frame, the
logic being further configured to:

receive, via the receiver, the retransmitted data frame, the retransmitted data frame
being received without a signaling message identifying the retransmitted data frame,

compare the retransmitted data frame to data frames stored in the memory, the
data frames stored in the memory comprising data frames that were received with errors,

identify a first data frame stored in the memory that potentially corresponds to the
retransmitted data frame, and

combine the retransmitted data frame with the first data frame to form a combined
data frame.

37. (new) The system of claim 36, wherein when comparing, the logic is configured to:
determine whether a likelihood of a match between the retransmitted data frame and one
of the data frames stored in the memory exceeds a first threshold, and when identifying, the logic
is configured to:

identify a data frame in which the likelihood of the match exceeds the first threshold as
the first data frame.

38. (new) The system of claim of claim 37, wherein the logic is further configured to:

decode the combined data frame,
perform an error check on the decoded combined data frame, and
delete the first data frame from the memory when the decoded combined data frame
passes the error check.

39. (new) The system of claim of claim 38, wherein the logic is further configured to:
determine, when the decoded combined data frame does not pass the error check, whether
the likelihood of the match is greater than a second threshold,
store the combined data frame in the memory, when the likelihood is greater than the
second threshold,
delete the first data frame from the memory, when the likelihood is greater than the
second threshold, and
store the retransmitted data frame in the memory, when the likelihood is not greater than
the second threshold.

40. (new) The system of claim 36, wherein when comparing, the logic is configured to:
compare a Hamming distance between the retransmitted data frame and the data frames
stored in the memory or compare a Euclidean distance between the retransmitted data frame and
the data frames stored in the memory.

41. (new) The system of claim 36, wherein when comparing, the logic is configured to:
identify data frames stored in the memory less than a predetermined time, and
bypass the comparing for data frames stored in the memory for less than the
predetermined time.